

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021922**Date Inspected:** 06-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Components**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector, Anand Upadhye was present during the times noted above for observations relative to the work being performed.

NDT

BAY 14

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted notification number 08471.

Ultrasonic Testing (UT).

This QA inspector performed UT of approximately 10 % of the area previously tested and accepted by ZPMC Quality control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

DP3172-001-019, 020, 021.

**WELDING**

This QA Inspector observed the following work in progress:

BAY 14

This QA Inspector observed ZPMC qualified welding personnel identified as 067572 perform welding by Shielded

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Metal Arc Welding (SMAW), on Side plate I-rib to I-rib weld of OBG Segment 14W. Weld joint is identified as SEG3020AZ-048. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2213-B-U2-FCM-1. This QA Inspector noted welding variables were 145~160 amperes and 24.4 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 045246 perform welding by Shielded Metal Arc Welding (SMAW), on Edge plate to Floor beam weld of OBG Segment 14W. Weld joint is identified as EP3030-001-056, 108. ZPMC Quality Control (QC) Inspector identified as Sun Tian Liang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2212-B-U2-FCM-1. This QA Inspector noted welding variables were 145~158 amperes and 26.7 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 047896 perform welding by Flux Cored Arc Welding (FCAW), on OBG Segment 14W. Weld joint is identified as SEG3020AZ-067, 072. ZPMC Quality Control (QC) Inspector identified as Sun Tian Liang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2133-ESAB. This QA Inspector noted welding variables were 250~266 amperes and 26.9 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 067572 perform welding by Shielded Metal Arc Welding (SMAW), on OBG Segment 14W. Weld joint is identified as SEG3020AZ-068, 073. ZPMC Quality Control (QC) Inspector identified as Sun Tian Liang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2114-FCM-1. This QA Inspector noted welding variables were 135~145 amperes and 23.6 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 045246 perform welding by Shielded Metal Arc Welding (SMAW), on Floor beam to Floor beam weld of OBG Segment 14W. Weld joint is identified as SEG3020R-020. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2212-B-U2-FCM-1. This QA Inspector noted welding variables were 168~180 amperes and 25.4 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066239 perform welding by Flux Cored Arc Welding (FCAW), on Edge plate to Side plate weld of OBG Segment 14W. Weld joint is identified as SEG3020AW-089. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2232-ESAB. This QA Inspector noted welding variables were 287~310 amperes and 26.1 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 067765 perform welding by Shielded Metal Arc Welding (SMAW), on Edge plate to Deck plate weld of OBG Segment 13AW. Weld joint is identified as SEG3013AA-117, 119. ZPMC Quality Control (QC) Inspector identified as Liu Fang was present to monitor

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the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 152~160 amperes and 24.2 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066179 perform welding by Shielded Metal Arc Welding (SMAW), on Floor beam stiffener of OBG Segment 13AW. Weld joint is identified as SEG3013Y-356, 358. ZPMC Quality Control (QC) Inspector identified as Liu Fang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 140~155 amperes and 24 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066912 perform welding by Flux Cored Arc Welding (FCAW), on K-plate to Floor beam I-rib weld of OBG Segment 13AW. Weld joint is identified as SEG3013AH-010. ZPMC Quality Control (QC) Inspector identified as Liu Fang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2232-ESAB. This QA Inspector noted welding variables were 278~290 amperes and 26 volts, which appears to be in compliance with the approved WPS.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No significant conversations were reported on this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, phone: 15000422372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Upadhye, Anand	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford, William	QA Reviewer

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